

AtoS



Installation and Startup Guide

Edition November 2013

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1 Introduction

This manual describes the installation of **TEMPO** (**T**est **E**xecution, **M**anagement, **P**lanning and **r**e**P**orting **O**rganizer) Version 6.1 as client.

Managing the test process involves a large number of engineering disciplines like project management, risk management, high and low level design, development and metrics collection. In former times testers managed their tests and test management with Word table or Excel sheets which had the main disadvantages that tests were not organized, couldn't be maintained easily, test packages couldn't be divided flexibly, no statistics could be provided a.s.o.

TEMPO was developed to make the test process and test management easier and to provide methods for test case design and development as well as test case execution and integration of test automation tools.

1.1 Definitions of terms and abbreviations

TEMPO Test Manager	TEMPO application
TEMPO Administrator	Part of TEMPO
TEMPO administrator	Person who is responsible for TEMPO in a test group
TEMPO user	Tester
\$INSTDIR\$	Directory where TEMPO has been installed

1.2 Validity of the manual

This installation guide is valid for the released version 6.1 of TEMPO and the development documents of TEMPO.

1.3 Target group

This installation guide is for TEMPO administrators and TEMPO users as well. It describes how to update TEMPO Test Manager as well as the procedure for TEMPO administrators to migrate a central database.

It is also valid for Clearquest Administrators who set up the TEMPO – Clearquest integration.

1.4 Structure of the manual

The structure of the guide provides a guideline for the various installation types of TEMPO.

2 Installation

2.1 System requirements

2.1.1 TEMPO client

2.1.1.1 Hardware

- Intel 1 GHz or Compatible
- 500 MB RAM (1 GB recommended)
- 70 MB hard disk space for application
- SVGA or higher resolution (800x600 256 colors)
- Mouse or other pointing device

2.1.1.2 Operating System

Microsoft Windows® 95, 98, NT4.0, 2000, XP, 7

2.1.1.3 Limitations

If you have test projects with a large amount of test cases (several thousands), it is recommended to use client PCs with at least 1GB RAM. Otherwise it may be possible that you will run into memory problems.



**Change in file "launcher.properties" the setting
"TEMPO.vmargs" = -Xms256m -Xmx512m -
DentityExpansionLimit=1000000**

If you are using TEMPO with clients in different locations all over the world, it is recommended to set up TEMPO on a Microsoft Terminal server.

TEMPO does not back up data on the database. The database administrator has to care about the backups.

2.1.2 Database

One of following database management systems (DBMS) located on any operating system can be used:

- Oracle 8, 9, 10, until 11G Release2 (min. 30Mb space)
- MS Access 2010 or lower: can only be used for evaluation
- PostgreSQL 9.3 or lower
- MS SQLServer 2005, 2008

2.1.3 TEMPO 6.1 Supported 3rd party products

Name	Company	Version
Change	IBM Telelogic	4.7
DOORS	IBM Telelogic	9.4
Bugzilla	Mozilla.org	Until 3.6
WinRunner	HP Mercury	7.2

QuickTest	HP Mercury	9.2
SilkTest	Borland Segue	5.0
TestPartner	Compuware	5.4
RequisitePro	IBM Rational	7.0
TEMPO Designer (IDATG)	Atos IT Solutions and Services	14.0

Table 1 - Supported 3rd party products

2.2 Evaluation

If you want to evaluate TEMPO, installation and setup is easy. There is no need of a database like Oracle or PostgreSQL. Follow the steps:

1. Start tempo.exe and select [TEMPO with Access](#)
2. After installation your Windows account is added automatically as TEMPO user. You can start TEMPO Test Manager without any password.
3. For evaluation you need to have a valid Node-locked license (license.dat) which has to be copied to your TEMPO installation directory. Ask TEMPO-support.it-solutions@atos.net for it.

2.3 Installation

The following 2 chapters describe the steps needed, if you setup TEMPO for the 1st time and on the other hand, if you upgrade TEMPO to a newer version where a database migration is needed.

2.3.1 Start up (installation of TEMPO for the 1st time)

The following 2 chapters are important for a TEMPO administrator and users, who set up a TEMPO environment for the 1st time.

2.3.1.1 ToDos for TEMPO administrators

- Choose a DBMS: MS Access only for evaluation, Oracle, MS SQL Server or PostgreSQL
- Set up the DB schema:
MS Access: You'll find a prepared access database in \$INSDIR\$. An ODBC connection to it will be created during the installation.
Oracle, MS SQL Server, PostGreSQL: Use the SQL scripts from \$INSDIR\$\ (see chapter 2.3.7 ff).
- Set up a license server for floating licenses: Refer to chapter 2.3.9.1.and chapter 4.6 of the user manual
- Install TEMPO client: Refer to chapter 2.3.3
- Open TEMPO Manager and create a new DSN: Refer to chapter 4.1 of the user manual
- Change to tab license and add the IP address of your license server. Keep it empty, if you use a node locked license.
- Change to tab database, enter <database-user> and <password> and press button Connect.
- Add TEMPO users: Refer to chapter 4.4 of the user manual.

2.3.1.2 ToDos for TEMPO users

- Install TEMPO client: Refer to chapter 2.3.3
- Open TEMPO Administrator and create a new DSN: Ask your TEMPO administrator for the parameters and/or refer to chapter 4.1 of the user manual.
- If you use floating licenses and a central license server, change to tab "license" and add the IP address of your license server.
- If you use a node-locked license, keep the values empty in tab "license" and copy license.dat into your TEMPO installation directory.
- Close TEMPO Administrator and start TEMPO

2.3.2 Upgrade to a new version

If there is a new version – a version is an increment of the number behind the 1st dot, e.g. 6.0 -> 6.1 – a database migration is necessary.

Please follow the steps in the chapters 2.3.2.1 and 2.3.2.2.

If there is an update – an update is an increment of the number behind the 2nd dot, e.g. 6.0.3 -> 6.0.4 – a database migration is not necessary.

2.3.2.1 TEMPO administrator

- Update your TEMPO client: Refer to chapter 2.3.3.
- Start TEMPO Manager and connect to the database.
- You will be prompted to migrate your database. After confirming the message, the migration tab change to enabled.
- Specify correct data for schema and tablespaces.
- You can either save the migration script (Save) for a manual migration via any SQL shell or start the migration (Migrate).

2.3.2.2 TEMPO user

Update your TEMPO client: Refer to chapter 2.3.3.

2.3.3 Installation instructions

 **Running TEMPO.exe starts the installation process.**

2.3.4 Update to TEMPO 6.1 client

After starting TEMPO.exe the Installer checks if a previous or lower (in case of patch-update) TEMPO version is installed on your computer. If an older TEMPO version is detected you can choose between updating and a complete (additional) installation.

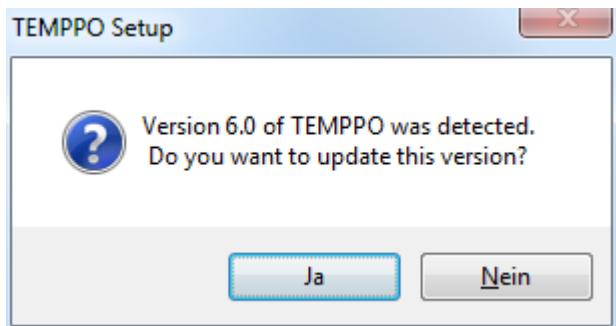


Figure 1: Older TEMPO version was detected

If you choose Yes the Installer checks, which files need to be replaced by newer ones, but all your personal settings especially from TEMPO Administrator like databases and database connections, license and multi user settings are kept. If you choose No TEMPO 6.0 will be installed completely new. See Figure 2.



Figure 2 - New installation

When pressing Next, Figure 3 is shown.

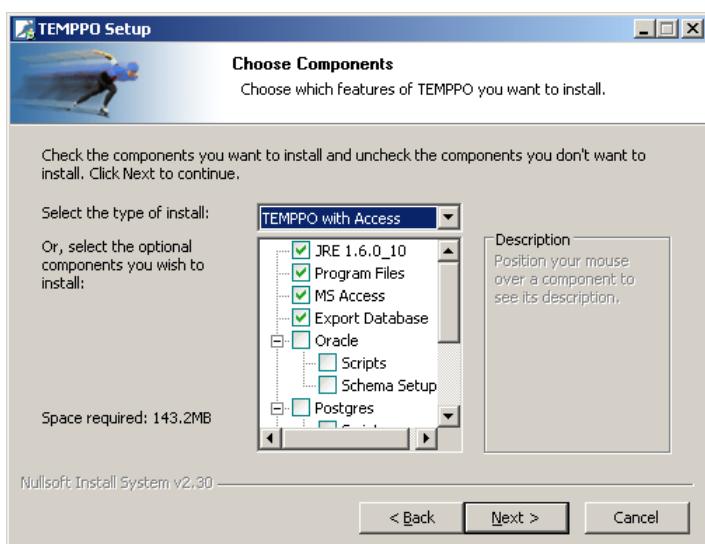


Figure 3 – Choose TEMPO components

You can choose between 5 installation types:

- [TEMPO standalone](#)

- [TEMPO with Access \(recommended\)](#)
- [TEMPO with Oracle](#)
- [TEMPO with SQLServer 2005](#)
- [TEMPO with PostGreSQL](#)
- [Complete](#)
- [Custom](#)



For the program files and MS Access, java runtime environment is mandatory.

2.3.5 TEMPO standalone installation

The TEMPO standalone installation type will just install the necessary files for running TEMPO. Neither an (local) Access database nor Oracle database configuration files will be installed. This installation type is recommended for a client, who wants to use an existing TEMPO database.

1. Choose **TEMPO standalone** for type of install and click the **Next** button.
2. Choose a directory, where to install TEMPO and click **Install** to start the installation.

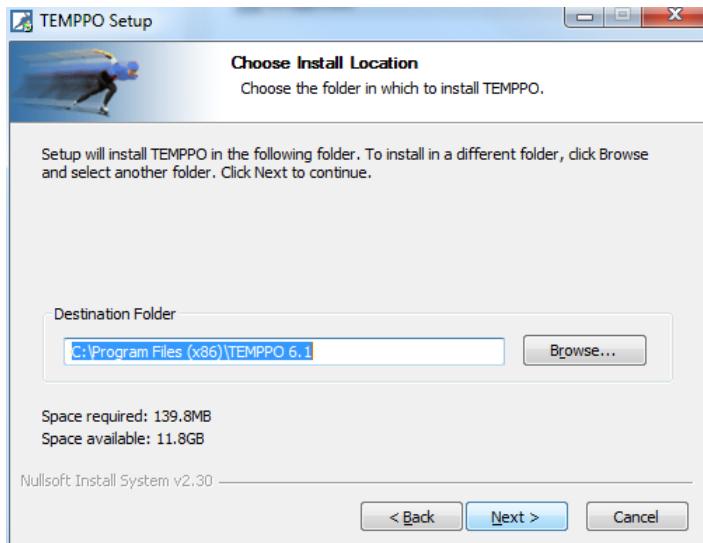


Figure 4 – Installation directory

3. During installation logging information is displayed. When installation is completed, click **Next**.

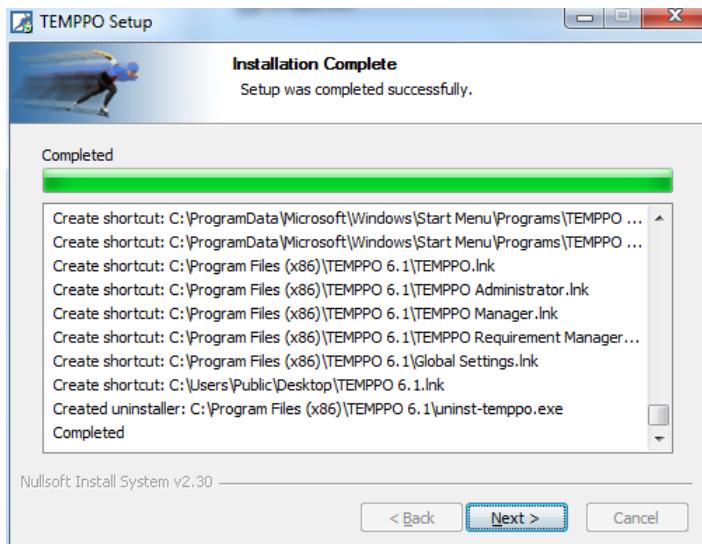


Figure 5 – Logging information

4. Click **Finish** to end the installation.

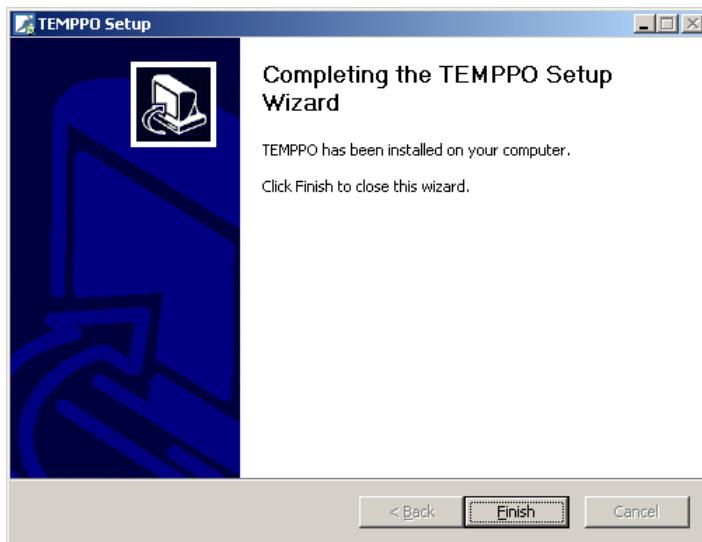


Figure 6 - Installation complete

5. Subsequently an overview of installed files and directories will be given:

\$INSDIR\$\jre	directory of JAVA runtime
\$INSDIR\$\TEMPOO Administrator	shortcut for TEMPOO administration tool
\$INSDIR\$\TEMPOO Manager	shortcut for TEMPOO manager tool
\$INSDIR\$\TEMPOO V5.5	shortcut for TEMPOO application
\$INSDIR\$\TEMPOO Requirement Manager	shortcut for TEMPOO requirement management application
\$INSDIR\$\TEMPOO.mdb	Access DB for evaluation
\$INSDIR\$\TEMPOO_export.mdb	Access DB for offline testing
\$INSDIR\$\TEMPOO.ico	TEMPOO icon
\$INSDIR\$\TEMPOOAdmin.ico	TEMPOO Administrator icon
\$INSDIR\$\uninst-TEMPOO.exe	TEMPOO uninstaller
\$INSDIR\$\UserManual.pdf	TEMPOO user manual
\$INSDIR\$\UserManual_RM.pdf	TEMPOO Requirement Manager user manual

\$INSTDIR\$\lib\tempo.jar	TEMPOO classes
\$INSTDIR\$\lib\lib.jar	TEMPOO library
\$INSTDIR\$\\XML\\teststructure.dtd	DTD for XML import
\$INSTDIR\$\\XML\\testsuite.dtd	DTD for XML import
\$INSTDIR\$\\XML\\tasklist.xml	RTD for task list
\$INSTDIR\$\\XML\\sample.xml	Example XML-file for import
\$INSTDIR\$\\log\\	Directory for the log files
\$INSTDIR\$\\dxl\\	Script for DOORS connection

C:\\Documents and Settings\\<your account>\\.tempo\\user.prefs	TEMPOO user settings
C:\\Documents and Settings\\<your account>\\.tempo\\admin.settings	TEMPOO Administrator
C:\\Documents and Settings\\<your account>\\.tempo\\rm.settings	TEMPOO Requirement Manager settings
C:\\Documents and Settings\\<your account>\\.tempo\\tm.settings	TEMPOO Test Manager settings
C:\\Documents and Settings\\<your account>\\.tempo\\global.settings	TEMPOO global settings

2.3.6 TEMPOO with Access installation

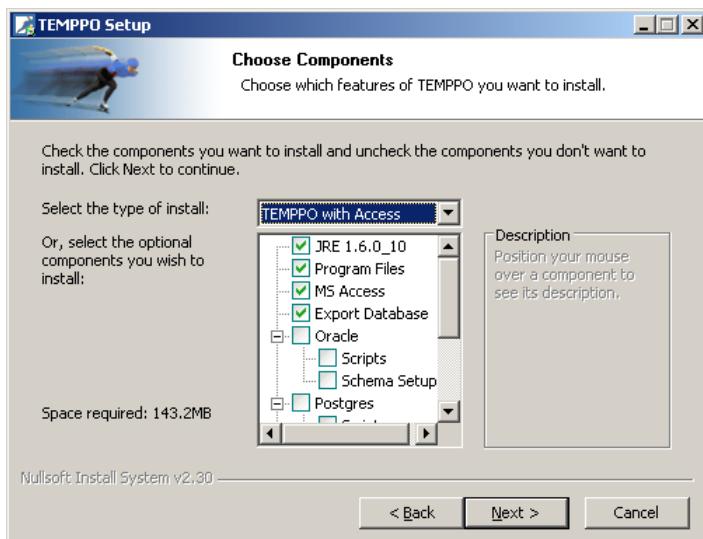


Figure 7 – Access installation

This installation type extends the [TEMPOO standalone installation](#) by the installation and configuration of a prepared MS Access TEMPOO database.

- Choose **TEMPOO with Access** for type of install and click the **Next** button.
- Choose a directory, where to install TEMPOO and click **Install** to start the installation.
- If a Java Runtime Environment is detected, you can either choose to run TEMPOO with this version by clicking **Yes** or you can install the delivered version by clicking **No**.
- Click **Finish** to end the installation.
- Additionally to the files described in [TEMPOO standalone installation Step 4](#) your database is installed: \$INSTDIR\$\\tempo.mdb

2.3.7 TEMPOO with Oracle installation

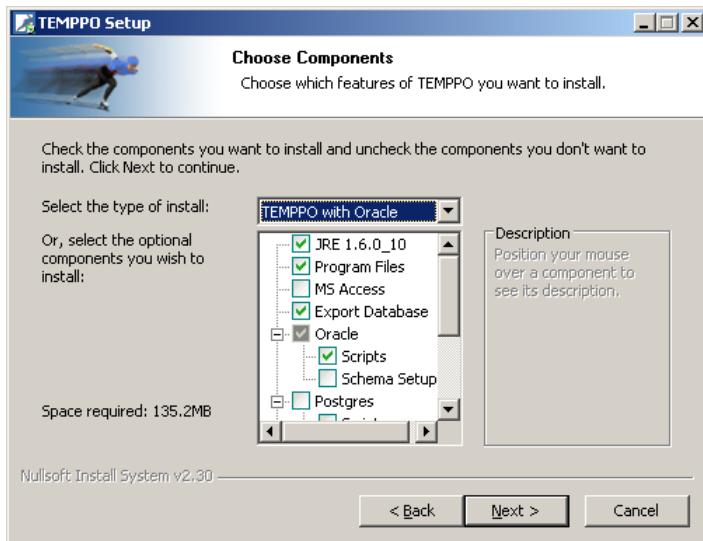


Figure 8 – Oracle Installation

This installation type extends the [TEMPOO standalone installation](#) by installing configuration files for setting up a TEMPOO schema on an Oracle database. This requires an already existing Oracle 7.3 (or higher) database.

- Choose **TEMPOO with Oracle** for type of install and click the **Next** button.
- Choose a directory, where to install TEMPOO and click **Install** to start the installation.
- If a Java Runtime Environment is detected, you can either choose to run TEMPOO with this version by clicking **Yes** or you can install the delivered version by clicking **No**.
- Click **Finish** to end the installation.

Additionally to the files described in [TEMPOO standalone installation Step 4](#) the following files will be installed:

\$INSDIR\$ \oracle\createTempoOra.sql

Oracle schema creation script. Default metadata will be created.

\$INSDIR\$ \oracle\createTempoOraEmpty.sql

Oracle schema creation script. The schema will be completely empty.

\$INSDIR\$ \oracle\migrate.sql

Script for TEMPOO schema migration. If no migration is needed, this file will not be created.

With either `createTempoOra.sql` or `createTempoOraEmpty.sql` you can create a TEMPOO Schema on an existing Oracle database. The TEMPOO schema is prepared to use several tablespaces, which should initially be dimensioned as follows:

Data / Default tablespace: 250 MB

Index tablespace: 250 MB

Temporary tablespace: 202 MB

These values strongly depend on the size of your future test structures and how

excessive you use the upload feature and they can be adapted to your needs on demand.

To run one of the scripts use either SQLPlus or your preferred SQL tool. The scripts must be started with parameters, which are described in the head of each file. Since the parameters are specific to your database configuration, please contact the responsible administrator for carrying out the schema setup.

You need to know values for following parameters to be able to run either scripts:

- Database name
- Default tablespace (must already exist, will carry data)
- Index tablespace (must already exist, will carry indices)
- Temporary tablespace (must already exist)
- Administrator account and password

Further you must choose name and password for a schema, which will be created during installation (The chosen name must be unique on your DB!).

In the following, the creation of the schema done by the scripts is explained. The examples use following values:

Administrator	<admin>
Password	<1234>
Database	<apps>
Default tablespace	<TEMPO01>
Index tablespace	<INDX01>
Temporary tablespace	<TMP>
Schema	<TEMPO_50>
Schema password	<temppo>

The execution of SQLPlus would look like as follows:

```
sqlplus admin/1234@apps AS SYSDBA @createTempoOra.sql TEMPO_50
tempo apps TEMPO01 TMP INDX01
```

First step of creating the schema is the **creation of the schema owner**. He will get special privileges, to be able to act as schema administrator (create, alter and drop TEMPO users):

```
CREATE USER TEMPO_50 IDENTIFIED BY *****
DEFAULT TABLESPACE TEMPO01
TEMPORARY TABLESPACE TMP
    QUOTA UNLIMITED ON TEMPO01
    QUOTA UNLIMITED ON TMP
    QUOTA UNLIMITED ON INDX01;

GRANT CREATE SESSION, ALTER SESSION TO TEMPO_42;
GRANT CREATE USER TO TEMPO_50;
GRANT ALTER USER TO TEMPO_50;
GRANT DROP USER TO TEMPO_50;
```

```
GRANT SELECT ON DBA_USERS TO TEMPO_50;
GRANT SELECT ON DBA_TABLESPACES TO TEMPO_50;
```

Next step is the creation of roles, which will be used to authorize the future TEMPO users to work on the schema:

```
CREATE ROLE TEMPO_50_TEMPPO_CONNECT;
GRANT CREATE SESSION TO TEMPO_50_TEMPPO_CONNECT;
CREATE ROLE TEMPO_50_TEMPPO_DEVELOPER IDENTIFIED BY *****;
GRANT TEMPO_50_TEMPPO_CONNECT TO TEMPO_50 WITH ADMIN OPTION;
GRANT TEMPO_50_TEMPPO_DEVELOPER TO TEMPO_50 WITH ADMIN OPTION;
```

Finally the tables, indices and sequences will be created. If `createTempoOra.sql` is used, default data (test levels, test categories) will be created as well.

2.3.7.1 Oracle Schema Setup

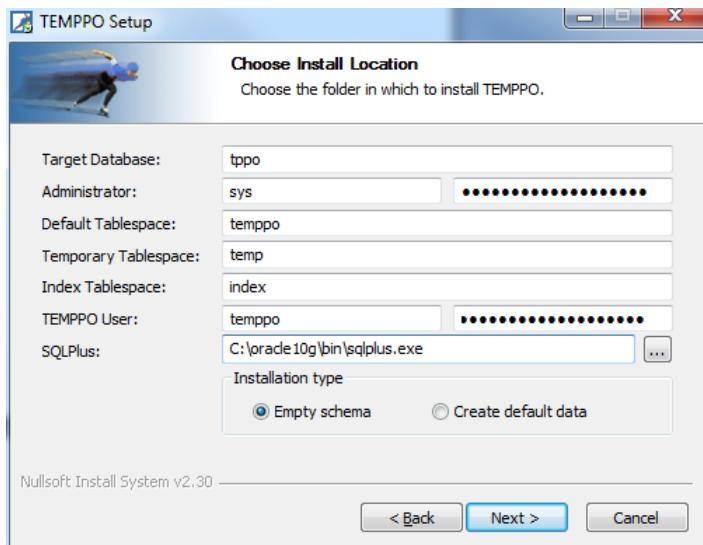


Figure 9 – Oracle Schema Setup

If you've selected the **Schema Setup** you can setup the TEMPO schema on your oracle database via the installer. To carry out the schema setup you need some information about your database, which you can obtain from the responsible administrator. Following parameters are needed:

- **Target Database:** The SID of the database, where you want to setup the TEMPO Schema.
- **Administrator:** An administrator account and its password. This account must have granted the role **SYSDBA**, otherwise the connection to the database will fail!
- **Tablespaces:** The names of default (data), temporary and index tablespaces.
- **TEMPO User:** During setup the owner of the schema will be created. This user and its password must be specified here.
- **SQLPlus:** The installer sets up the schema via SQLPlus. Here you have to specify, where the installer will find SQLPlus.
- **Installation type:** You can choose between an empty schema or a schema, which will contain a demo project.
- Click Install to start the installation. During installation logging information will be displayed which you can send to the TEMPO support team in case of installation problems.

2.3.8 TEMPO database on with SQLServer 2005 Installation

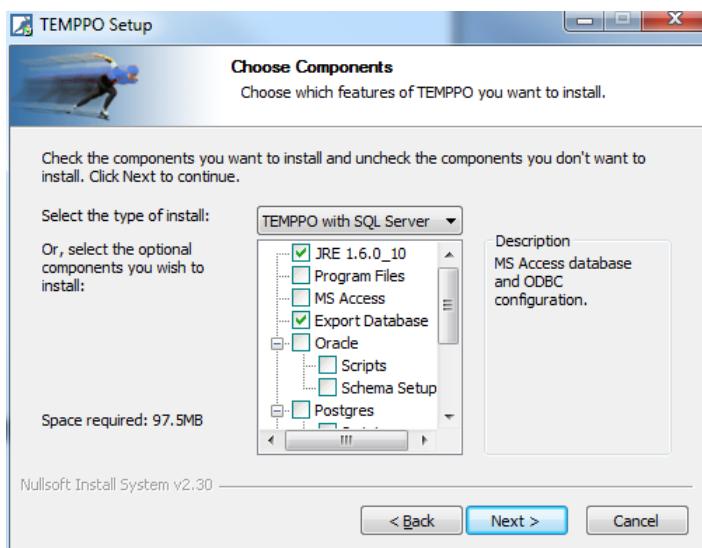


Figure 10 – SQLServer 2005 Installation

You can either setup a database schema either by saving and executing scripts or creating the schema by TEMPO. Both possibilities are explained in the following 2 chapters:

i Please use a database user with sysadmin rights and not a Windows user for creating the schema!

2.3.8.1 SQL Server Scripts

This installation type extends the [TEMPO standalone installation](#) by installing configuration files for setting up a TEMPO schema on an SQLServer 2005 database. This requires an already existing SQLServer 2005 (or higher) database (Install MS SQLServer 2005., see [Installing SQL Server 2005](#))

- Choose **TEMPO with SQL Server** for type of install, activate checkbox **Scripts** and click the **Next** button.
- Choose a directory, where to install TEMPO and click **Install** to start the installation.
- If a Java Runtime Environment is detected, you can either choose to run TEMPO with this version by clicking **Yes** or you can install the delivered version by clicking **No**.
- Click **Finish** to end the installation.

Additionally to the files described in [TEMPO standalone installation Step 4](#) the following files will be installed:

```
$INSTDIR$ \sqlserver\ createTempoSqlServer.sql      Sqlserver
                                         schema creation script.
                                         Default metadata will be
                                         created.

$INSTDIR$ \sqlserver\ createTempoSqlServerEmpty.sql    SqlServer
                                         schema creation script.
                                         The schema will be
                                         completely empty.

$INSTDIR$ \sqlserver\ createTempoSqlServer_trigger.sql  SqlServer
                                         trigger creation script.
```

\$INSTDIR\$ \sqlserver\migrate.sql

Script for TEMPO schema migration. If no migration is needed, this file will not be created.

\$INSTDIR\$ \sqljdbc.jar

jar-file for db-connection.

With either `createTempoSqlServer.sql` or `createTempoSqlServerEmpty.sql` (plus `createTempoSqlServer_trigger.sql`) you can create a TEMPO Schema on an existing SqlServer database.

Schema creation with scripts:

In the following, the creation of the schema done by the scripts is explained. The examples use following values:

User: database user with **sysadmin rights**

Password: password of this database user

Server: where the SqlServer is installed (e.g. atpcxxxy\TEMPO)

Database: name of the database (e.g. tempo_50)

Own: name of the database + '.dbo' (e.g. tempo_50.dbo)

Pwd: password of the db-owner (e.g. pwd of the tempo_50 user)

Inputfile: path and name of the creation file (e.g. c:\temp\test.sql)

The execution of SQLcmd would look like as follows:

Create DB including user and tables:

```
$ sqlcmd -U user -P password -S server -v own=database.dbo -v
pwd=password -v sid= database -i inputfile
```

Example with values:

```
$ sqlcmd -U sa -P hugo -S atpcxxxy\tempo -v own=tempo_50.dbo -v
pwd=hugo -v sid= tempo_50 -i c:\temp\test.sql
```

Run TEMPO SQL script for Trigger:

```
$ sqlcmd -U sa -P hugo -S atpcxxxy\tempo -d tempo_50 -v own=
tempo_50.dbo -v sid= tempo_50 -i c:\temp\test_trigger.sql
```

2.3.8.2 SQLServer Schema Setup

This installation type extends the [TEMPO standalone installation](#) by installing configuration files for setting up a TEMPO schema on an SQLServer 2005 database. This requires an already existing SqlServer 2005 (or higher) database (Install MS SqlServer 2005., see [Installing SQL Server 2005](#))

- Choose **TEMPO with SQL Server** for type of install, activate checkbox **Schema Setup** and click the **Next** button.
- Choose a directory, where to install TEMPO and click **Install** to start the installation.
- If a Java Runtime Environment is detected, you can either choose to run TEMPO with this version by clicking **Yes** or you can install the delivered version by clicking **No**.
- Click **Finish** to end the installation.

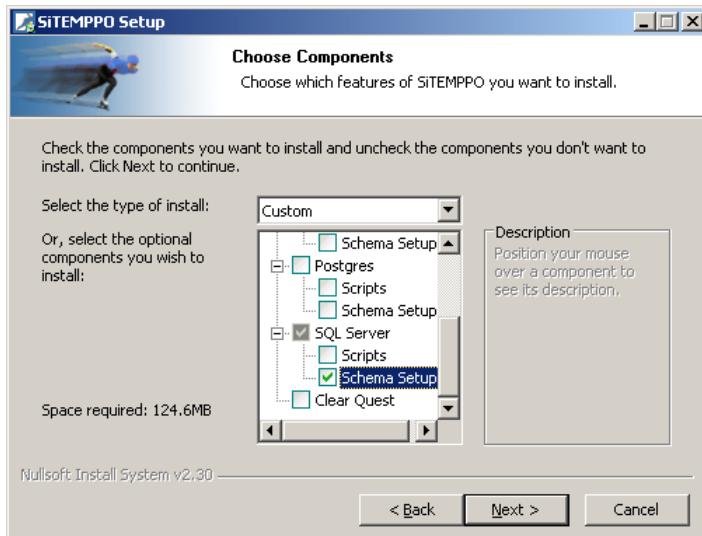


Figure 11 - Select Schema setup

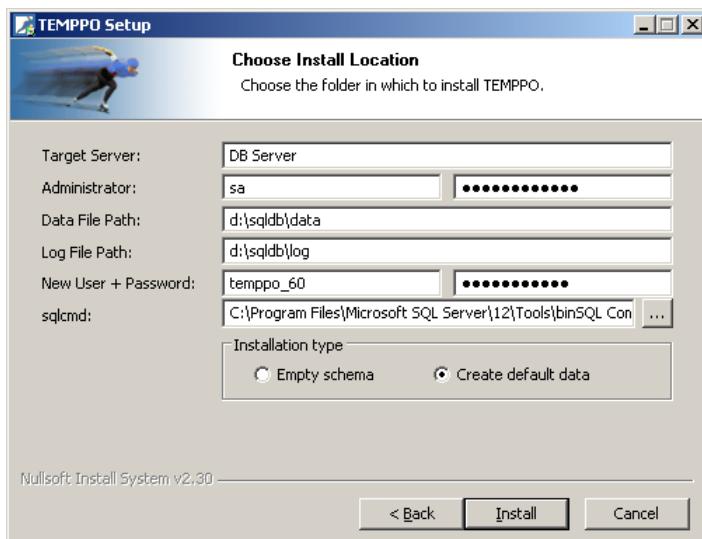


Figure 12 - Schema setup

If you've selected the **Schema Setup** you can setup the TEMPO schema on your SQLServer database server via the installer. To carry out the schema setup you need some information about your database, which you can obtain from the responsible administrator. Following parameters are needed:

Target Server: IP address or host name of your database server.

Administrator: SQL server database account with sysadmin rights and its password.

Data file path: Path where your database server stores data files.

Log file path: Path where your database server stores log files.

New User + Pw: During setup the owner of the schema will be created. This user and its password must be specified here.

sqlcmd: The installer sets up the schema via the sqlcmd shell. Here you have to specify, where the installer will find sqlcmd.exe.

Installation type: You can choose between an empty schema or a schema, which will contain default metadata.

Click Install to start the installation. During installation logging information will be displayed (see Figure 5), which you can send to the TEMPO support team in case of installation problems.

After finishing the installation start TEMPO Manager which look like follows:

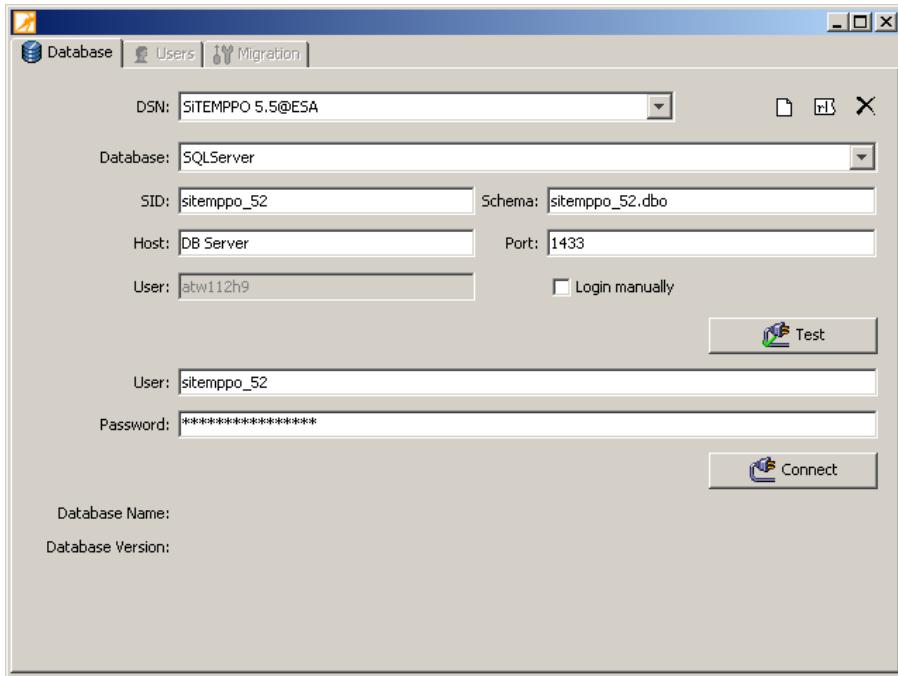


Figure 13 - TEMPO Manager after installation

2.3.9 TEMPO with PostgreSQL Installation

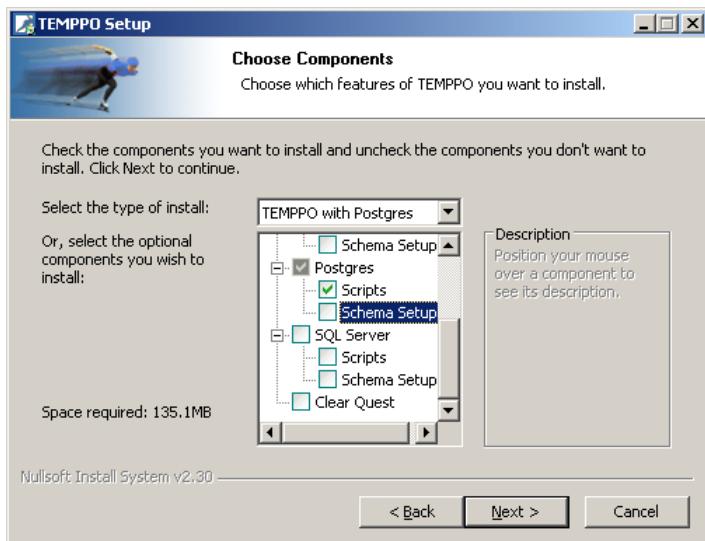


Figure 14 - TEMPO with PostgreSQL

This installation type extends the [TEMPO standalone installation](#) by installing configuration files for setting up a TEMPO schema on an PostgreSQL database. This requires an already existing PostgreSQL 8.0 (or higher) database (see <http://pgfoundry.org/projects/pginstaller/> for the windows distribution).

- Choose **TEMPO with PostGreSQL** for type of install and click the **Next** button.
- Choose a directory, where to install TEMPO (if not installed) and the necessary PostgreSQL files, then click **Install** to start the installation.
- If TEMPO client is not installed:
If a Java Runtime Environment is detected, you can either choose to run TEMPO with this version by clicking **Yes** or you can install the delivered version by clicking **No**.
- Click **Finish** to end the installation.

Additionally to the files described in [TEMPO standalone installation Step 4](#) the following files will be installed:

\$INSDIR\$ \postgres\createTempoPsql.sql

PostgreSQL schema creation script. Default metadata will be created.

\$INSDIR\$ \postgres\createTempoPsqlEmpty.sql

PostgreSQL schema creation script. The schema will be completely empty.

\$INSDIR\$ \postgres\migrate.sql

Script for TEMPO schema migration. If no migration is needed, this file will not be created.

With either `createTempoPsql.sql` or `createTempoPsqlEmpty.sql` you can create a TEMPO Schema on an existing PostgreSQL database.

To run one of the scripts you must use the psql shell. The scripts must be started with parameters, which are described in the head of each file. Since the parameters are specific to your database configuration, please contact the responsible administrator for carrying out the schema setup.

You need to know values for following parameters to be able to run either scripts:

Target database
Host and port of target database
Administrator account and password

Further you must choose name for a schema, which will be created during installation (The chosen name must be unique on your DB!).

In the following, the creation of the schema done by the scripts is explained. The examples use following values:

Administrator	<admin>
Password	<1234>
Database	<apps>
Host	<atpcXYZ>Z
Port	<5432>
Schema	<TEMPO>O_52

The execution of psql would look like as follows:

```
psql -v "schema=TEMPO_52" -f createTempoPsql.sql -U admin -h atpcXYZ -p 5432 -d apps
```

You will be prompted for the password when entering this command. Afterwards the TEMPO schema will be created on the database.

2.3.9.1 PostgreSQL Schema Setup

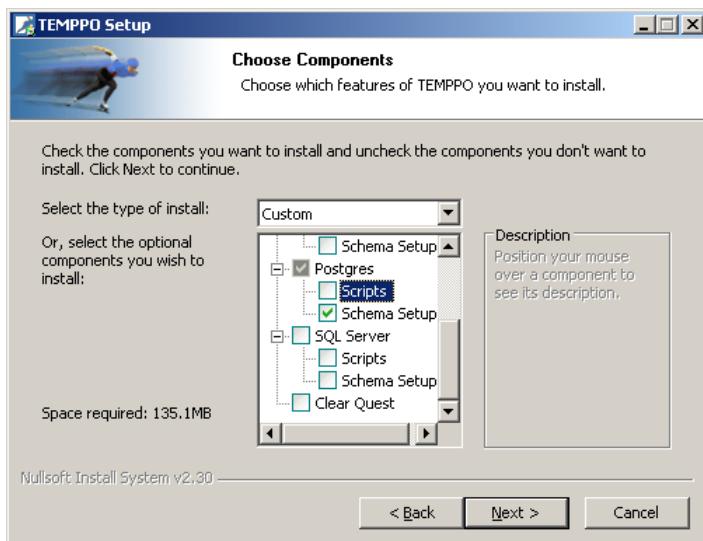


Figure 15 - Select Schema setup



Figure 16 – PostgreSQL Schema Setup

If you've checked the **Schema Setup** you can setup the TEMPOO schema on your PostgreSQL database via the installer. To carry out the schema setup you need some information about your database, which you can obtain from the responsible administrator. Following parameters are needed:

Target Database: The SID of the database, where you want to setup the TEMPOO Schema.

Host:Port: Host and port, where the target database is running.

Administrator: An administrator account and its password.

Schema: During setup a schema will be created. The name of the schema must be specified here.

Psql: The installer sets up the schema via the psql shell (included in the Postgres windows installer). Here you have to specify, where the installer will find psql.exe.

Installation type: You can choose between an empty schema or a schema, which will contain default metadata.

Click Install to start the installation. During installation logging information will be displayed, which you can send to the TEMPOO support team in case of installation problems.

2.3.10 ClearQuest Scripts Installation



Figure 17 – ClearQuest Scripts

For using the change management tool ClearQuest it's necessary to install Perl scripts on the ClearQuest server:

Login to ClearQuest server machine and start **TEMPO.exe**

The Perl scripts are copied to the installation path of TEMPO and in the file <Installation Path Rational>\common\rwp\IHS\conf\httpd.conf, a new entry is created in order to give TEMPO access to the script via web:

```
Alias /scripts "<Installation Path TEMPO>\cq_scripts"
```

If the following message comes up during installation, you have to add the entry described before manually.



Figure 18 – No Clear Quest entry created

Please open the file httpd.conf in directory <Installation Path of Rational>\common\rwp\IHS\conf\ and

add the following line:

```
Alias /scripts "<Installation Path TEMPO>\cq_scripts"
```

Please restart Clearquest server

2.4 License server installation

This installation type will install the JLMS (Java License Management System) license server. The license server will manage your floating TEMPO licenses. Several TEMPO clients can connect to the license server and request licenses, until all licenses are in use. After exiting the application the license is released again and available for another client.

Before you can install the license server you need to have a license file (**license.dat**). You can request a license at <mailto:TEMPO-support.it-solutions@atos.net>.

Choose a computer where you want to run the license server (maybe the database server) and run `licenseserver.exe`.

If you have a firewall between your clients and license server, the following firewall settings are required:

- No blocking of `javaw.exe` in installation directory of license server for incoming and outgoing connections.
- Enable the following ports:
 - For incoming connections: chosen port during installation (2000) and port range 60000 – 61000
 - For outgoing connections: all high-end ports

2.4.1 License server

There is no need to migrate your license server. TEMPO 5.8/6.0 clients can connect to TEMPO license server 5.3 or higher.

2.4.2 Install license server for the 1st time

Start `licenseserver.exe` and the following message comes up:



Figure 19 - New installation

Enter a destination folder

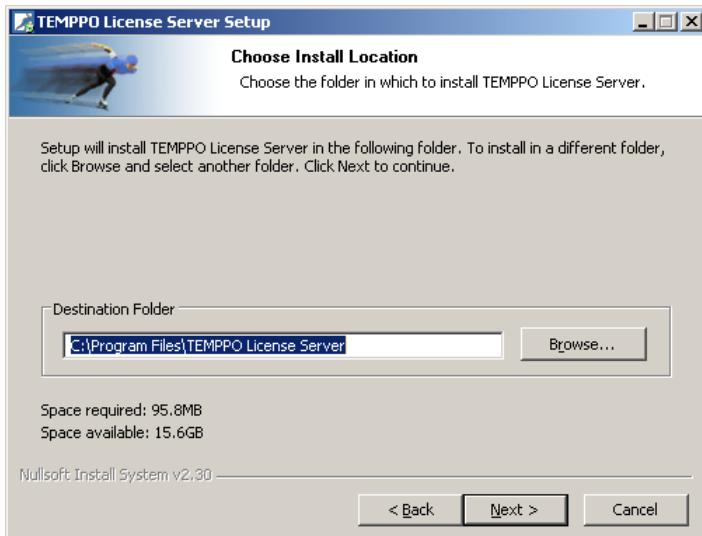


Figure 20 - New installation - Specify path

Enter the location of the license.dat file. **Hint:** Create first the directory set above and copy there the license file.

More license servers: If you would like to install more than one license on a machine, you can enter different values for Service name and port.



Figure 21 - New installation - Specify license file

Press **Next** for starting installation:

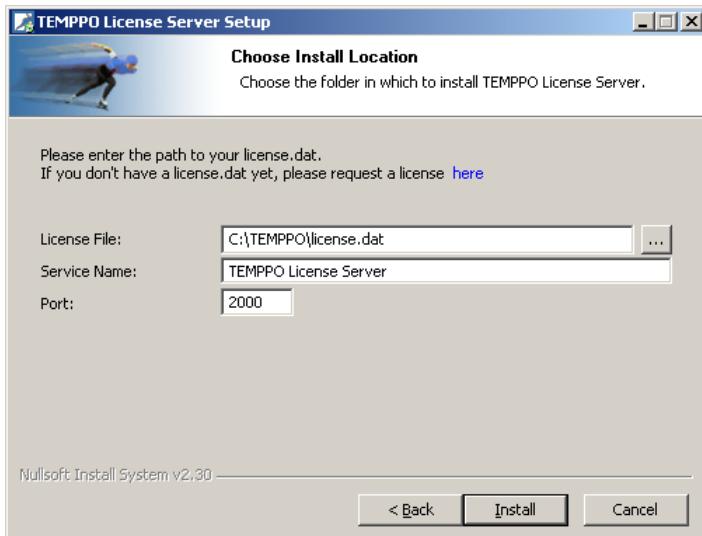


Figure 22 - New Installation - Start

Press **Next** for finishing installation and starting license server automatically.

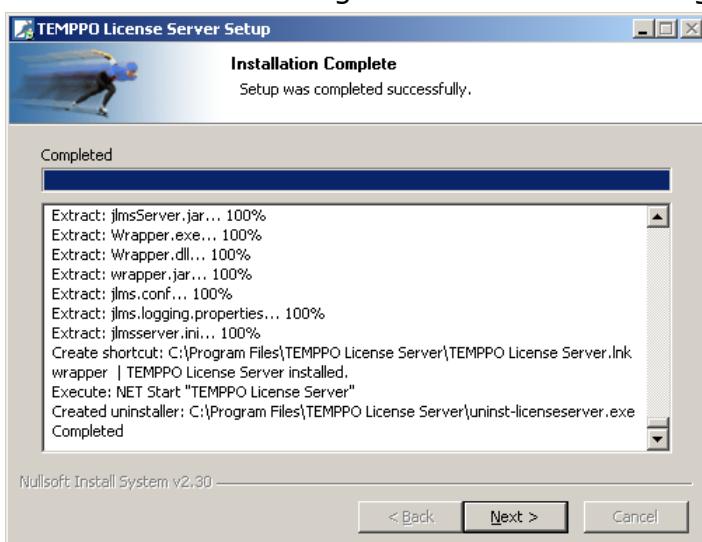


Figure 23 - Finished installation

Subsequently an overview will be given about installed files and directories:

\$INSTDIR\$\jre directory of JAVA runtime
\$INSTDIR\$\TEMPOO License Server shortcut for license server
\$INSTDIR\$\wrapper.exe license server executable that will run as service
\$INSTDIR\$\jlmsServer.ini license server initialization file

2.4.3 Configuring license server

For restricting the users having privilege to request a license for your server, you have to add following attribute to `jlmsServer.ini`:

```
jlms.users = user1; \
              user2; \
              user3; \
              user4
```

The list of users must be semicolon-separated.



Before working with TEMPO, stop the license server and add your users to **jLMServer.ini** who are allowed to have access to the license server. Then start the license server again.

2.4.4 Start / Stop license server

License server is started and stopped via Windows services

3 Startup & first steps

Before starting up TEMPO application, you need to do several tasks:

- Install database plus connection creation
- License
- Users / super user
- Create project
- Assign meta data

3.1 Database connection

When evaluating TEMPO it is recommended to install TEMPO with Access (see chapter 2.3.6). After installation automatically a DSN is created (see Figure 24). In TEMPO Administrator you can create as many database connections as you want. The current set connection is used, when starting TEMPO application.

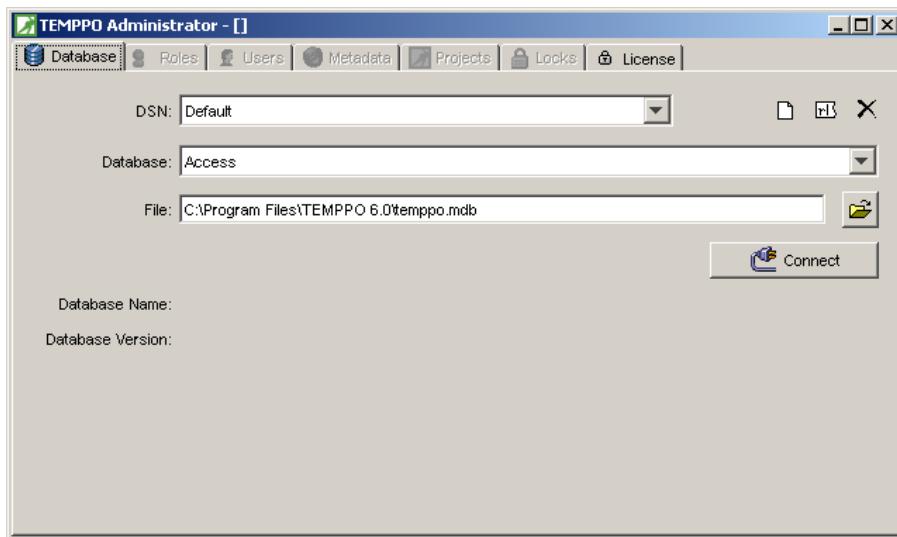


Figure 24 - TEMPO Administrator – DSN

3.2 License

3.2.1 Configuration

TEMPO can use node-locked and floating licenses. If you are evaluating TEMPO or using a node-locked license, you have to copy the license.dat file to your TEMPO directory. When starting TEMPO application, first of all a license.dat file is searched.

On the other hand you can use floating licenses, which need the installation of the TEMPO license server (see chapter 2.4, item 8). Each user has to specify the host name or IP address and the port of the license server. See Figure 25.

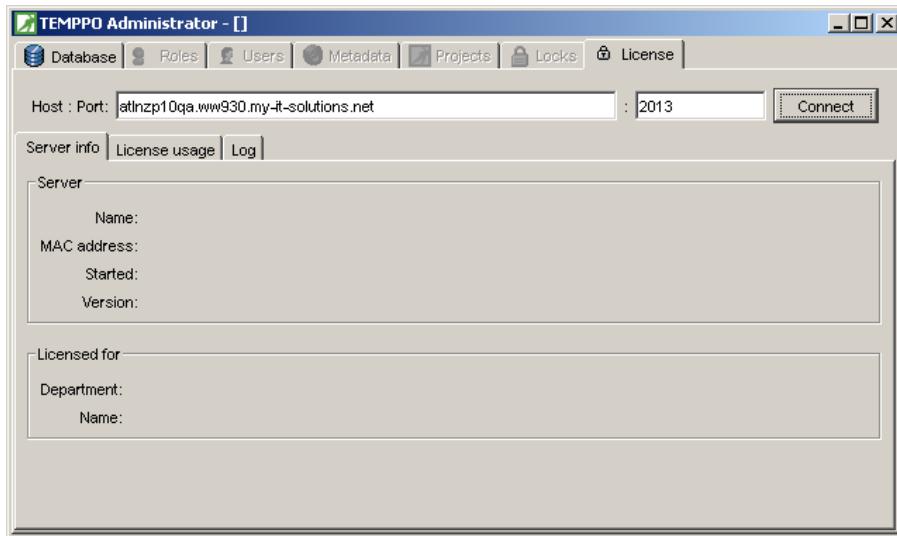


Figure 25 - Specify the license server

3.2.2 Connection problems

If host and port are correct and client cannot connect to license server, the reason may be the order of network adapters. If you are using several network adapters, the Ethernet card has to be first in the list of network adapters.

3.3 Users / super user

In the next step you have to create users, especially a super user. First of all you have to start TEMPOO Manager, which is the application for the test manager. It is used to create a super user and to migrate the database if necessary. When pressing the button **Connect** (if not using Access, you have to enter the database user plus password), the tabs **Users** and **Migration** get enabled.

For details see User Manual, chapter User management.



SQLSERVER: if a superuser is created, the following procedure has to be executed via a console or EnterpriseManager by an sysadmin: exec sp_addsrvrolemember N'\$(sid)',N'sysadmin'

3.4 Create project / Assign meta data

Before starting TEMPOO application a project has to be created and meta data has to be assigned to the project.

The database provides an amount of predefined, but extendable meta data like test levels, test categories, requirements, user defined attributes. But before using them in a project, they have to be defined.

For details see User Manual, chapters projects and customizing meta data.

3.5 Starting TEMPOO

When fulfilling all the steps described above you can start TEMPOO. It is recommended to activate the DSN chooser, which pops up a window (see Figure 27) for selecting the DNS (if you use more than one databases).

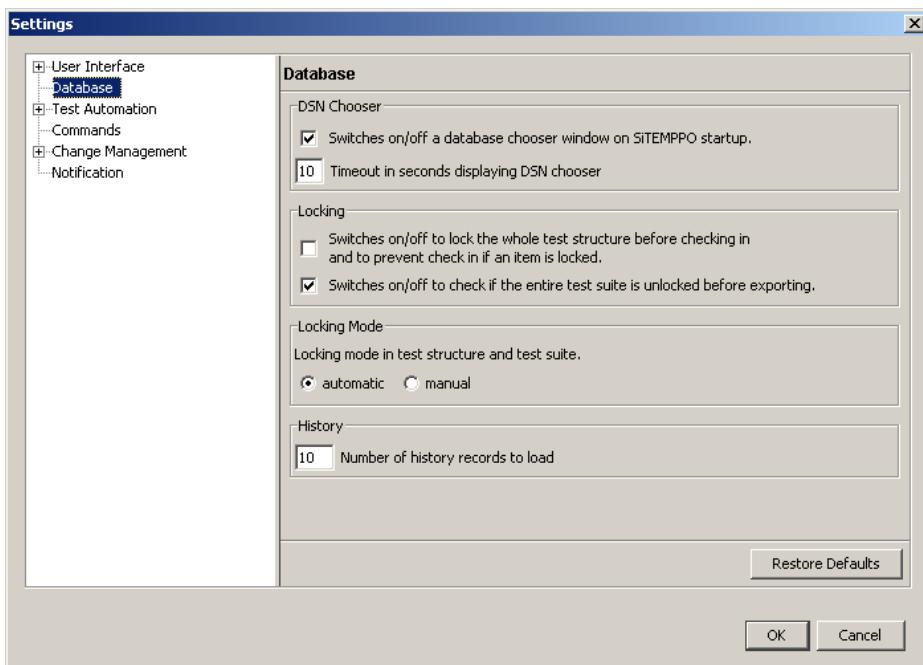


Figure 26 - Settings dialog

When using manual logins (= logins different from Windows logins) you have to activate the checkbox "Manual login for the session" and after pressing OK, Figure 28 is shown, where you can enter a user name together with password.

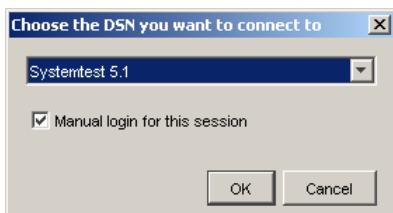


Figure 27 - Choosing a database



Figure 28 - Manual login



Manual logins are not possible for MS Access

4 Appendix

4.1 Used libraries

The table below names used in TEMPO

Library	Ver.	License	URL
JFreeChart	1.0.6	LGPL	http://www.jfree.org/jfreechart/index.html
Jakarta Commons CLI	1.0	Apache License	http://jakarta.apache.org/commons/cli/
Jakarta Commons HTTP Client	3.0.1	Apache License	http://jakarta.apache.org/commons/httpclient/
Hexidec	1.1	LGPL	http://www.hexidec.com/ekit.php
Majix	2.0	MPL	http://sourceforge.net/projects/majix/
NSIS	2.30	zlib/libpng	http://www.gzip.org/zlib/zlib_license.html
Java Service Wrapper	3.0.3	MIT License	http://wrapper.tanukisoftware.org